

REMARKS

Reconsideration of the subject application are respectfully requested in light of the comments which follow. As correctly noted in the Office Action Summary, claims 1-35 are pending and claims 9, 10, and 20-34 have been withdrawn.

CLAIM REJECTIONS UNDER 35 U.S.C. §103

Claims 1-8, 11-19 and 35 stand rejected under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent No. 5,191,256 to Reiter, Jr. et al. (hereafter "*Reiter, Jr. et al.*") in view of U.S. Patent No. 4,182,027 to Benezech (hereafter "*Benezech*") on the grounds set forth in paragraph 3 of the Official Action. Thus, for at least the reasons noted below, this rejection should be withdrawn.

Reiter, Jr. et al. discloses a rotor with magnets 17 located in channels 16 of rotor frame 40 of the rotor. Pole pieces 18 are placed in channels, that is outer faces 17b of the magnets 17. Col. 5, lines 6-8. The rotor has endcaps 50 attached to rotor frame 40 via fastener 51.

Reiter, Jr. et al. does not disclose resin in the rotor or the use of resin in the process of producing the rotor. Also, the rotor frame 40 of *Reiter, Jr. et al.* has no internal space. Further, *Reiter, Jr. et al.* does not disclose an outer cylinder in contrast to the assertion in the Office Action of paragraph 3. Rather, the outermost structure of the rotor of Reiter are the elongate pole pieces 18, e.g., individual bars, which in no way form an outer cylinder of the rotor. Fig. 4 of *Reiter, Jr. et al.* illustrates a longitudinal section through the rotor. In this section, a first pole piece 18 is visible at the top of the illustration and a further pole

piece 18 is visible at the bottom of the illustration. In order to hold the pole pieces 18 together, so-called closure disks 50, are located at both ends of the rotor and are bolted by fasteners 51 that use threaded bolts to attach to the individual elongate pole pieces 18. Thus, the design of the rotor frame disclosed in *Reiter, Jr. et al.* is vastly different from the design of the presently claimed invention in that at least the outer cylinder and the resin are not disclosed, taught or suggested by *Reiter, Jr. et al.*

The Office Action thus relies upon the disclosure in *Benezech* to overcome the deficiencies in the disclosure of *Reiter, Jr. et al.*

Benezech discloses an epoxy adhesive placed in the rotor. For example, *Benezech* states "the thus assembled rotor is rotated at relatively low speed and a synthetic-resin adhesive, preferably of the epoxy type, is poured into it so that it will automatically centrifugally distribute itself over the inner surface to form an adhesive layer 39 that extends between all of the interfaces of the magnets 15, pieces 16 and blocks 19. Thereafter the rotor is spun at relatively high speed to further drive the adhesive into all of the interfaces. Any unbalances can be cured of this time by placing weights such as shown at 35 in Fig. 1 into the grooves 23. Such weights will of course be secured in place by the layer 39 of adhesive." See column 4, line 34 *et. seq.*

Applicant's independent claim 1 introduces a resin mass into an internal space of the core. However, the core of *Reiter, Jr. et al.* has no internal space, but rather is solid. *Benezech* does not disclose introducing a resin mass into the internal space nor is there a statement regarding the location of the rotor at which the resin is introduced. Furthermore, the internal space of *Benezech's* rotor is occupied by an assembling tool and pistons 25 of

an assembling tool seal against the ring 24 such that no flow from the internal space towards the outside is possible. So, *Benezech* does not disclose introducing a resin mass into a internal space. Thus, even if *Reiter, Jr. et al.* and *Benezech* were to be combined in the manner proposed by the Examiner, Applicant's independent claim 1 would not have resulted.

Further in contrast to Applicant's claimed method, *Benezech* discloses merely the adding of an epoxy adhesive and not a resin mass. *Benezech* introduces, at a location which is not disclosed, an adhesive, preferably epoxy, which distributes itself exclusively between all interfaces in order to bond the magnets 15, pieces 16 and blocks 19 together. *Benezech* does not disclose the flowing of the adhesive generally to a region of the permanent magnets, but rather the epoxy adhesive flows to specific surfaces of the respective parts of the rotor, e.g., to the pieces 16 and the blocks 19. Also, *Benezech* does not disclose any hardening of the adhesive. Thus, even if *Reiter, Jr. et al.* and *Benezech* were to be combined in the manner proposed by the Examiner, Applicant's independent claim 1 would not have resulted.

For at least the above noted reasons, it is respectfully asserted that the combination of the disclosures in *Reiter, Jr. et al.* and in *Benezech* do not disclose, teach, or suggest Applicant's claim 1 and withdrawal of the rejection is respectfully requested.

The following distinguishing features with respect to Applicant's dependent claims are also noted:

With regard to claim 2, Applicant notes that *Benezech* does not disclose any heating because his adhesive needs no heating. Further, a combination of heating and

simultaneously running up to a centrifuging speed is also not disclosed by *Benezech*. In addition, *Benezech* does not disclose maintaining the rotor at a centrifuging speed during the hardening of the resin mass as claimed. *Reiter, Jr. et al.* is silent as to the use of resin. Because *Reiter, Jr. et al.* is silent as to the use of resin and *Benezech* does not disclose a resin, but rather an epoxy adhesive, then the combination of *Reiter, Jr. et al.* and *Benezech* is also absent a disclosure, teaching or suggestion of this feature and the rejection of claim 2 should be withdrawn.

With regard to claim 3, the magnets 17 of *Reiter, Jr. et al.* are firmly held by the pole pieces 18, which in turn are locked by threaded bolts 51 to end caps 50. The magnets 15 and pole pieces 16 of *Benezech* are clamped together by action of a clamping tool 26-29 and plastic deformation. Therefore, neither *Reiter, Jr. et al.* nor *Benezech* disclose, teach or suggest arranging the permanent magnets on the core by inserting the permanent magnets into the outer cylinder with play as recited in claim 3. For at least this additional reason, the rejection of claim 3 should be withdrawn.

Which regard to claim 4, *Benezech* discloses pouring the adhesive into the rotor, e.g., pouring a liquid, and does not disclose a resin mass in the form of a solid. *Reiter, Jr. et al.* does not even disclose a space into which a solid rod can be placed. Thus, the combination disclosures in *Reiter, Jr. et al.* and *Benezech* do not disclose, teach or suggest this feature and the rejection of claim 4 should be withdrawn.

With regard to claim 5, *Benezech* mentions only a synthetic-resin adhesive, preferably of the epoxy type. No filler is disclosed. *Reiter, Jr. et al.* is silent with respect

to this feature. Thus, the combination disclosures in *Reiter, Jr. et al.* and *Benezech* do not disclose, teach or suggest this feature and the rejection of claim 5 should be withdrawn.

With regard to claim 6, *Reiter, Jr. et al.* has no outer cylinder. The outermost structures in the rotor of *Reiter, Jr. et al.* are the elongate pole pieces 18. These are bolted to the end disks 50. The procedure of *Benezech* is to press magnets 15 and steel pole pieces 16 against the rim 14 by operation of the tool 24-28. Also, *Benezech* makes no reference to any end disk. Accordingly, there is no disclosure, teaching or suggestion, in *Reiter, Jr. et al.* and *Benezech*, either alone or in combination, to shrink the outer cylinder onto closure disks as recited in claim 6. Withdrawal of this rejection is requested.

With regard to claims 7 and 8, it is to be noted that neither *Reiter, Jr. et al.* nor *Benezech* disclose a shrunk-on outer cylinder connected flush to the closure disks by means of a circumferential weld seam. Further, because there is no disclosure of a weld seam, there is no distinctive welding process steps disclosed in *Reiter, Jr. et al.* or *Benezech* as presented in claim 8. Thus, both claims 7 and 8 are distinguishable over the combination of disclosures in *Reiter, Jr. et al.* and *Benezech* and withdrawal of the rejections is requested.

With regard to claim 11, it is to be noted that neither *Reiter, Jr. et al.* nor *Benezech* mention and disclose magnetic neutral zones containing no permanent magnets. Further, there is no disclosure, teaching, or suggestion in the disclosures in *Reiter, Jr. et al.* nor *Benezech*, either alone or in combination, of filler pieces as presented in claim 11. Thus, the rejection of claim 11 should be withdrawn.

With regard to claim 12 neither *Reiter, Jr. et al.* nor *Benezech* disclose any filler strips between adjacent permanent magnets. Thus, claim 12 is allowable.

With regard to claim 13, *Reiter, Jr. et al.* has no outer cylinder and the magnets 15 of *Benezech* contact the rim 14 directly. Therefore, the combination of disclosures in *Reiter, Jr. et al.* nor *Benezech*, either alone or in combination, do not disclose, teach, or suggest filler strips between permanent magnets and inner circumferential regions of an outer cylinder and the rejection of claim 13 should be withdrawn.

Neither *Reiter, Jr. et al.* nor *Benezech*, either alone or in combination, disclose, teach, or suggest a cage (claim 14). Therefore, the additional method steps connected with the cage claimed in claim 15 are necessarily not present in the disclosures of *Reiter, Jr. et al.* and *Benezech*, either alone or in combination. Thus, the rejection of claims 14 and 15 should be withdrawn.

With regard to claim 16, *Reiter, Jr. et al.* discloses elongate, bar-shaped magnets 17 and elongate, bar-shaped pole pieces 18. Likewise, *Benezech* exclusively discloses bar-shaped magnets 15 and pole pieces 16. Thus, the documents relied upon in the rejection do not disclose, teach or suggest a process including stacking metal sheets on a centering tube to produce the core, the centering tube having holes for the passage of resin mass arranged in the internal space and the metal sheets having slots aligned with the holes for the further passage of the resin as recited in claim 16. Accordingly, the rejection of claim 16 should be withdrawn.

With regard to claim 17, *Reiter, Jr. et al.* does not disclose an internal space in core 40, but rather a solid core. The internal space of *Benezech* houses the actuating element

with the frustoconical end 29. The radial channel houses the actuating tool parts 25, 26, 27. Conclusively, there exists no storage space for the resin mass. Indeed, in *Benezech* the epoxy is poured into the structure and is not stored in an internal space. Thus, the combination of disclosures in *Reiter, Jr. et al.* nor *Benezech*, either alone or in combination, do not disclose, teach, or suggest Applicant's claim 17.

With regard to claim 18, neither *Reiter, Jr. et al.* nor *Benezech* disclose a polygonal recess at both axial ends of the core. Thus, this feature is absent from the combination of disclosures in *Reiter, Jr. et al.* nor *Benezech*, either alone or in combination, and is not disclosed, taught, or suggested by the combination. Accordingly, the rejection of claim 18 should be withdrawn.

With regard to claim 19, the core of *Reiter, Jr. et al.* has a star-shaped cross-section and not a polygonal shaped cross-section. The core of *Benezech* is precisely circular and also not of a polygonal shaped cross-section. Thus, the combination of disclosures in *Reiter, Jr. et al.* nor *Benezech*, either alone or in combination, do not disclose, teach, or suggest Applicant's claim 19 and the rejection should be withdrawn.

Finally, with regard to claim 35, neither *Reiter, Jr. et al.* nor *Benezech* disclose, teach or suggest any welding, moreover disclose, teach or suggest spot welding. Thus, the combination of disclosures in *Reiter, Jr. et al.* nor *Benezech*, either alone or in combination, do not disclose, teach, or suggest Applicant's claim 35 and the rejection should be withdrawn.

CONCLUSION

From the foregoing, further and favorable action in the form of a Notice of Allowance is earnestly solicited. Should the Examiner feel that any issues remain, it is requested that the undersigned be contacted so that any such issues may be adequately addressed and prosecution of the instant application expedited.

Respectfully submitted,

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